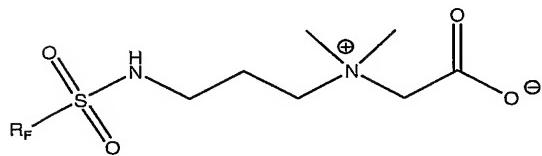


CLAIMS

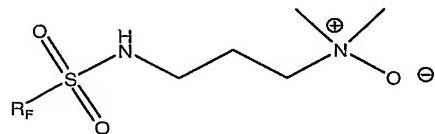
The invention claimed is:

1. A surfactant composition comprising R_F-Q_s, wherein:
R_F has a greater affinity for a first part of a system having at least two parts than Q_s;
5 Q_s has a greater affinity for a second part of the system than R_F; and
R_F comprises at least two -CF₃ groups and at least two hydrogens.
2. The surfactant composition of claim 1 wherein R_F is hydrophobic relative to Q_s.
3. The surfactant composition of claim 1 wherein Q_s is hydrophilic relative to R_F.
- 10 4. The surfactant composition of claim 1 wherein R_F is hydrophobic and Q_s is hydrophilic.
5. The surfactant composition of claim 1 wherein R_F comprises at least one -CH₂- group.
- 15 6. The surfactant composition of claim 1 wherein R_F comprises at least one cyclic group.
7. The surfactant composition of claim 1 wherein R_F comprises at least one cyclic group.
8. The surfactant composition of claim 7 wherein the cyclic group comprises an aromatic group.
- 20 9. The surfactant composition of claim 1 wherein R_F comprises at least one (CF₃)₂CF- group.
10. The surfactant composition of claim 1 wherein R_F comprises at least three -CF₃ groups.
- 25 11. The surfactant composition of claim 1 wherein R_F comprises at least two (CF₃)₂CF- groups.
12. The surfactant composition of claim 1 wherein R_F comprises at least four carbons and one of the four carbons comprises a -CH₂- group.

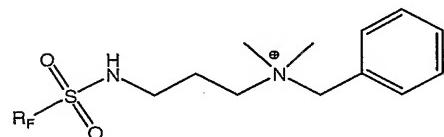
13. The surfactant composition of claim 1 wherein R_F-Q_s is



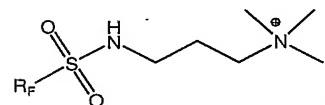
14. The surfactant composition of claim 1 wherein R_F-Q_s is



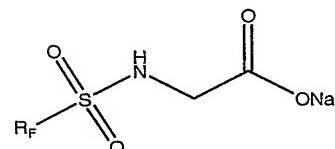
5 15. The surfactant composition of claim 1 wherein R_F-Q_s is



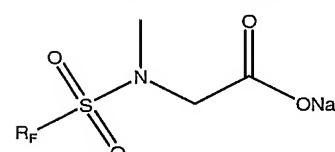
16. The surfactant composition of claim 1 wherein R_F-Q_s is



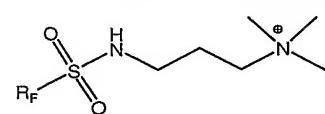
17. The surfactant composition of claim 1 wherein R_F-Q_s is



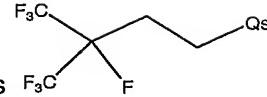
10 18. The surfactant composition of claim 1 wherein R_F-Q_s is



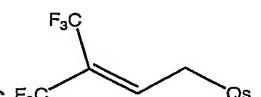
19. The surfactant composition of claim 1 wherein R_F-Q_s is



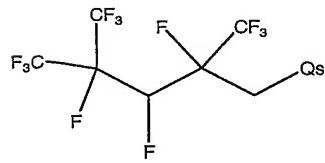
15 20. The surfactant composition of claim 1 wherein R_F-Q_s is



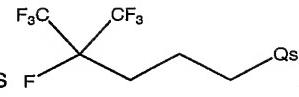
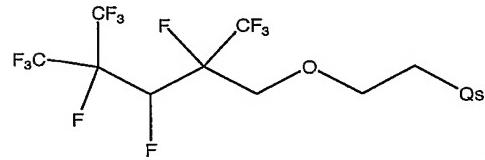
21. The surfactant composition of claim 1 wherein R_F-Q_s is



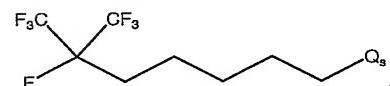
22. The surfactant composition of claim 1 wherein R_F-Q_s is



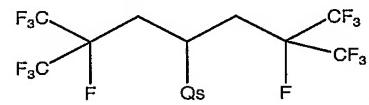
23. The surfactant composition of claim 1 wherein R_F-Q_s is



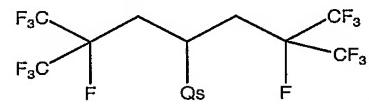
5 24. The surfactant composition of claim 1 wherein R_F-Q_s is



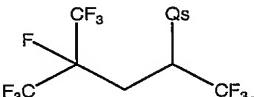
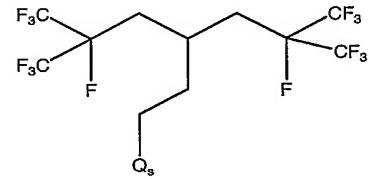
25. The surfactant composition of claim 1 wherein R_F-Q_s is



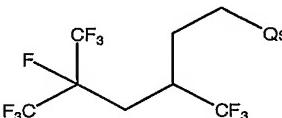
26. The surfactant composition of claim 1 wherein R_F-Q_s is



10 27. The surfactant composition of claim 1 wherein R_F-Q_s is



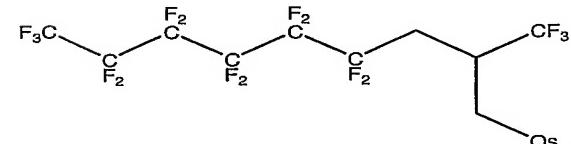
28. The surfactant composition of claim 1 wherein R_F-Q_s is



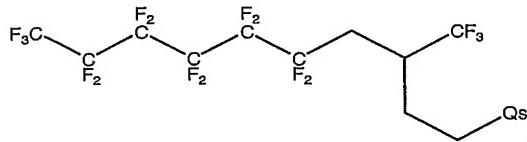
29. The surfactant composition of claim 1 wherein R_F-Q_s is



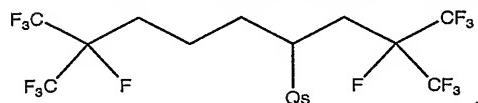
30. The surfactant composition of claim 1 wherein R_F-Q_s is



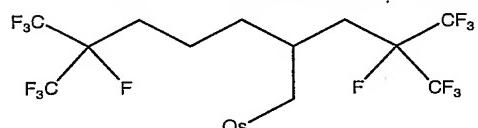
31. The surfactant composition of claim 1 wherein R_F-Q_s is



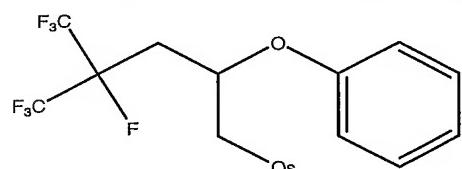
32. The surfactant composition of claim 1 wherein R_F-Q_s is



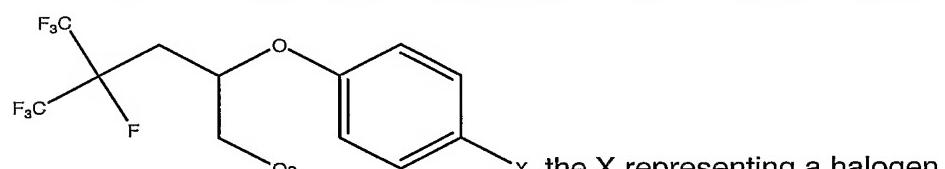
5 33. The surfactant composition of claim 1 wherein R_F-Q_s is



34. The surfactant composition of claim 1 wherein R_F-Q_s is



35. The surfactant composition of claim 1 wherein R_F-Q_s is



10 x, the X representing a halogen.

36. A detergent comprising a surfactant composition, the surfactant composition comprising R_F-Q_s, wherein:

R_F has a greater affinity for a first part of a system having at least two parts than Q_s;

Q_s has a greater affinity for a second part of the system than R_F; and

15 R_F comprises at least two -CF₃ groups and at least two hydrogens.

37. An emulsifier comprising a surfactant composition, the surfactant composition comprising R_F-Q_s, wherein:

R_F has a greater affinity for a first part of a system having at least two parts than Q_s;

Q_s has a greater affinity for a second part of the system than R_F; and

20 R_F comprises at least two -CF₃ groups and at least two hydrogens.

38. A paint comprising a surfactant composition, the surfactant composition comprising R_F-Q_s , wherein:

R_F has a greater affinity for a first part of a system having at least two parts than Q_s ;

Q_s has a greater affinity for a second part of the system than R_F ; and

5 R_F comprises at least two $-CF_3$ groups and at least two hydrogens.

39. An adhesive comprising a surfactant composition, the surfactant composition comprising R_F-Q_s , wherein:

R_F has a greater affinity for a first part of a system having at least two parts than Q_s ;

Q_s has a greater affinity for a second part of the system than R_F ; and

10 R_F comprises at least two $-CF_3$ groups and at least two hydrogens.

40. An ink comprising a surfactant composition, the surfactant composition comprising R_F-Q_s , wherein:

R_F has a greater affinity for a first part of a system having at least two parts than Q_s ;

Q_s has a greater affinity for a second part of the system than R_F ; and

15 R_F comprises at least two $-CF_3$ groups and at least two hydrogens.

41. A wetting agent comprising a surfactant composition, the surfactant composition comprising R_F-Q_s , wherein:

R_F has a greater affinity for a first part of a system having at least two parts than Q_s ;

Q_s has a greater affinity for a second part of the system than R_F ; and

20 R_F comprises at least two $-CF_3$ groups and at least two hydrogens.

42. A foamer comprising a surfactant composition, the surfactant composition comprising R_F-Q_s , wherein:

R_F has a greater affinity for a first part of a system having at least two parts than Q_s ;

Q_s has a greater affinity for a second part of the system than R_F ; and

25 R_F comprises at least two $-CF_3$ groups and at least two hydrogens.

43. A defoamer comprising a surfactant composition, the surfactant comprising R_F-Q_s , wherein:

R_F has a greater affinity for a first part of a system having at least two parts than Q_s ;

Q_s has a greater affinity for a second part of the system than R_F ; and

30 R_F comprises at least two $-CF_3$ groups and at least two hydrogens.

44. A production process comprising:

providing a first compound, the first compound comprising at least two -CF₃ groups and two hydrogens, a portion of the first compound representing R_F of an R_F-Q_s surfactant, wherein:

5 R_F has a greater affinity for a first part of a system having at least two parts than Q_s;

Q_s has a greater affinity for a second part of the system than R_F; and

R_F comprises the two -CF₃ groups and the two hydrogens; and

adding Q_s to R_F to form the R_F-Q_s surfactant.

10 45. The production process of claim 44 wherein R_F is hydrophobic relative to Q_s.

46. The production process of claim 44 wherein Q_s is hydrophilic relative to R_F.

47. The production process of claim 44 wherein R_F is hydrophobic and Q_s is hydrophilic

15 48. The production process of claim 44 wherein R_F comprises at least one -CH₂- group.

49. The production process of claim 44 wherein R_F comprises at least one cyclic group.

50. The production process of claim 49 wherein the cyclic group comprises an aromatic group.

20 51. The production process of claim 44 wherein R_F comprises at least one (CF₃)₂CF- group.

52. The production process of claim 44 wherein R_F comprises at least three -CF₃ groups.

25 53. The production process of claim 44 wherein R_F comprises at least two (CF₃)₂CF- groups.

54. The production process of claim 44 wherein R_F comprises at least four carbons and one of the four carbons comprises a -CH₂- group.

55. A process for altering a surface tension of a part of a system having at least two parts, comprising adding a surfactant composition comprising R_F-Q_s to a portion of the system, wherein:

5 R_F has a greater affinity for one part of the system than Q_s;

Q_s has a greater affinity for another part of the system than R_F; and

R_F comprises at least two -CF₃ groups and at least two hydrogens.

56. The process of claim 55 wherein R_F is hydrophobic relative to Q_s.

57. The process of claim 55 wherein Q_s is hydrophilic relative to R_F.

58. The process of claim 55 wherein R_F is hydrophobic and Q_s is hydrophilic.

10 59. The process of claim 55 wherein R_F comprises at least one -CH₂- group.

60. The process of claim 55 wherein R_F comprises at least one cyclic group.

61. The process of claim 60 wherein the cyclic group comprises an aromatic group.

62. The process of claim 55 wherein R_F comprises at least one (CF₃)₂CF- group.

15 63. The process of claim 55 wherein R_F comprises at least three -CF₃ groups.

64. The process of claim 55 wherein R_F comprises at least two (CF₃)₂CF- groups.